



Attorney Docket No.	LIGHT2700
First Named Inventor:	Frederik Marcel Van Der Vliet
Application Number	10/644,395
Filing Date:	August 19, 2003
Examiner Name:	Wood, Kevin S.
Group/Art Unit:	2874
Title	MULTIPLEXER HAVING IMPROVED EFFICIENCY

BOX FEE AMENDMENT

Assistant Commissioner for Patents

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INFORMATION DISCLOSURE STATEMENT

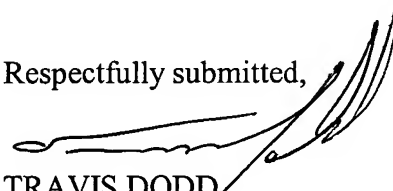
Applicant hereby cites the documents listed in the accompanying Form PTO-1449 with respect to the above reference patent application under the provision of 37 CFR 1.97(b). Copies of the documents are attached.

Because the above Patent Application was filed after June 2003, copies of the U.S. Patent Applications and the U.S. Patent Application Publications were not provided. However, the Applicant will be happy to provide these copies at the request of the Examiner.

The Examiner is respectfully requested to make the listed documents of record in connection with the prosecution of the subject application.

Date: 1-10-06

Respectfully submitted,


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SHEET	1	OF	3	Docket Number	LIGHT2700

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (If known)			
	1	4,747,654		Yi-Yan	May 31, 1988	
	2	4,813,757		Sakanao et al.	March 21, 1989	
	3	4,836,645		Leferve et al.	June 6, 1989	
	4	4,846,542		Okayama et al.	July 11, 1989	
	5	4,956,682		Ohnaka et al.	September 11, 1990	
	6	5,013,113		Soref	May 7, 1991	
	7	5,231,683		Hockaday et al.	July 27, 1993	
	8	5,347,601		Ade et al.	September 13, 1994	
	9	5,511,142		Horie, et al	April 23, 1996	
	10	5,581,643		Wu	December 3, 1996	
	11	5,710,847		Takano et al.	January 20, 1998	
	12	6,278,168 B1		Day	August 21, 2001	
	13	6,393,272 B1		Brinkman et a.	May 21, 2002	
	14	6,885,795		Hsu et al.	April 26, 2005	
	15	6,921,490 B1		Qian et al	July 26, 2005	
	16	2003/0133661A1		Adibi, et al.	July 17, 2003	
	17	2003/0044118A1		Zhou, et al.	March 6, 2003	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (If known)				
	18	EPO	0849615A2		Alcatel Alsthom Compagnie Generale D'Electricite			
	19	EPO	11064657		Hitachi Cable Ltd.			
	20	JP	04358105A		Fujitsu Ltd.			
	21	JP	63197923		NEC Corp			

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ⁶
	22	ARONSON, L. B. et al., <i>Low-Cost Multimode WDM for Local Area Networks Up to 10 Gb/s</i> , IEEE Photonics Technology Letters, Vol. 10, No. 10, October 1998, pp 1489-1491.	
	23	BABA, S. et al., <i>A Novel Integrated-Twin-Guide (ITG) Optical Switch with a Built-in TIR Region</i> , IEEE Photonics Technology Letters, Vol. 4, No. 5, May 1992, pp 486-488.	
	24	BETTY, I. et al., <i>A Robust, Low-Crosstalk, InGaAsP/InP Total-Internal-Reflection Switch For Optical Cross-Connect Application</i>	
	25	BRENNER, T. et al., <i>Vertical InP/InGaAsP Tapers for Low-Loss Optical Fibre-Waveguide Coupling</i> , Electronics Letters 22 nd October 1992 Vol. 28 No. 22, pp. 2040-2041.	
	26	BURNS, W.K. et al., <i>Mode Conversion in Planar-Dielectric Separating Waveguides</i> ; IEEE Journal of Quantum Electronics, VOL QE-11, No.1, Jan 1975; pg 32-39	
	27	DUMBRAVESCU, N., <i>3-D Resolution Gray-Tone Lithography</i> , Proceedings of SPIE Vol. 4019 (2000) pp. 570-577.	
	28	GOEL, K. et al <i>Design Considerations for Low Switching Voltage Crossing Channel Switches</i> ; Journal of Lightwave Technology, VOL 6, No.6, June 1988; pg 881-886	

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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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	29	GRANESTRAND, P. et al., <i>Integrated Optics 4x4 Switch Matrix with Digital Optical Switches</i> ; Electronics Letters, VOL 26, No.1, Jan 4, 1990; pg 4-5	
	30	HIDA, Y. et al., <i>Highly Compact Silica-Based PLC-type 1x32 Splitters Using 127 μm-spacing Output and 0.4%-Δ Waveguides</i> , Electronics Letters, VOL 34, No.1, Jan 8, 1998; pg 75-76	
	31	HUANG, T.C. et al., <i>Depletion Edge Translation Waveguide Crossing Optical Switch</i> ; IEEE Photonics Technology Letters; VOL 1, No.7, Jul 1989, pg 168-170	
	32	ITO, F. et al., <i>Carrier-Injection-Type Optical Switch In GaAs With A 1.06-1.55 μm Wavelength Range</i> ; Appl. Physics Letters, 54(2) Jan 9, 1989; pg 134-136	
	33	Jeon, S. et al., <i>Simple Fabrication Method for Vertical Taper Using Tensile Stress-Induced Mask and Selective Etching Technique</i> , CLEO Pacific Rim '99 WR&, pp. 320-321.	
	34	KASAHARA, R. et al., <i>Low-Power Consumption Silica-Based 2x2 Thermo-optic Switch Using Trenched Silicon Substrate</i> , IEEE Photonics Technology Letters, VOL 11, No. 9, Sep 1999, pg 1132-1134	
	35	KHAN, M.N. et al., <i>Fabrication-Tolerant, Low-Loss, and High-Speed Digital Optical Switches in InGaAsP/InP Quantum Wells</i> ; Proc 21 st Eur.Conf.on Opt.Comm.(ECOC '95-Brussels), pg 103-106	
	36	KIRIHARA, T. et al., <i>Lossless And Low Crosstalk 4x4 Optical Switch Array</i> ; Electronics And Communications In Japan, Part 2, VOL 77, No.11, 1994, pg 73-81	
	37	KIRIHARA, T. et al., <i>Lossless and Low-Crosstalk Characteristics in an InP-Based 2x2 Optical Switch</i> , IEEE Photonics Technology Letters, VOL 5, No. 9 Sept 1993, pg 1059-1061	
	38	KLEY, et al., <i>Fabrication and Properties of Refractive Micro-Optical Profiles for Lenses, Lens arrays and Beam Shaping Elements</i> , Proceedings of SPIE Vol. 4231 (2000), pp 144-152.	
	39	LIU, Y.L. et al., <i>Silicon 1x2 Digital Optical Switch Using Plasma Dispersion</i> ; Electronics Letters, VOL 30, No.2, Jan20, 1994; pg 130-131	
	40	MOERMAN, I. et al., <i>A Review on Fabrication Technologies for the Monolithic Integration of Tapers with III-V Semiconductor Devices</i> ; IEEE Journal of Selected Topics in Quantum electronics, VOL 3, No.6, Dec. 1997, pg 1308-1320	
	41	MÜLLER, G. et al., <i>First Low Loss InP/InGaAsP Optical Switch with Integrated Mode Transformers</i> ; ThC12.10; Pg 37-40	
	42	NAYYER, J. et al., <i>Analysis of Reflection-Type Optical Switches with Intersecting Waveguides</i> , Journal of Lightwave Technology, VOL 6, No.6, June 1988; pg 1146-1152	
	43	NEGAMI, T. et al., <i>Guided-Wave Optical Wavelength Demultiplexer Using An Asymmetric Y Junction</i> ; Appl. Phys. Lett. 54 (12), Mar 20, 1989; pg 1080-1082	
	44	NELSON, W. et al., <i>Optical Switching Expands Communications-Network Capacity</i> ; Laser Focus World, Jun 1994, pg 517-520	
	45	NELSON, W.H. et al., <i>Wavelength-and Polarization-Independent Large Angle InP/InGaAsP Digital Optical Switches with Extinction Ratios Exceeding 20 dB</i> ; IEEE Photonics Technology Letters, VOL 6, No.11, Nov. 1994; pg 1332-1334	
	46	OKAYAMA, H. et al., <i>8x8 Ti:LiNbO₃ Waveguide Digital Optical Switch Matrix</i> ; IEICE Trans. Commun.; VOL E77-B, No.2; Feb. 1994; pg 204-208	
	47	OKAYAMA, H. et al., <i>Reduction of Voltage-Length Product for Y-Branch Digital Optical Switch</i> , Journal of Lightwave Technology, VOL 11, No.2, Feb 1993; pg 379-387	
	48	PENNINGS E., <i>Integrated-Optic Versus Microoptic Devices for Fiber-Optic Telecommunication Systems: A Comparison</i> ; Journal of Selected Topics in Quantum Electronics, Vol. 2-No. 2, pp. 151-164.	
	49	REIMER, K. et al., <i>Micro-Optic Fabrication Using One-Level Gray Tone Lithography</i> , SPIE Vol. 3008, pp 279-288.	
	50	REIMER, K. et al., <i>One-Level Gray-Tone Lithography Mask Data Preparation and Pattern Transfer</i> , SPIE Vol. 2783, pp. 71-79.	
	51	RENAUD, M. et al., <i>Compact Digital Optical Switches for Low Insertion Loss Large Switch Arrays on InP</i> ; Proc. 21 st Eur.Conf.on Opt. Comm. (ECOC '95-Brussels), pg 99-102	
	52	RICKMAN, A. G. et al., <i>Silicon-on-Insulator Optical Rib Waveguide Loss and Mode Characteristics</i> , Journal of Lightwave Technology, October 1994, Vol. 12-No. 10, pp 1771-1776.	
	53	ROLLAND, C. et al., <i>10 Gbit/s, 1.56 μm, Multiquantum Well InP/InGaAsP Mach-Zehnder Optical Modulator</i> , Electronics Letters, Mar 4, 1993, VOL 29, No.5, pg 471-472	
	54	SILBERBERG, Y. et al., <i>Digital Optical Switch</i> ; Appl. Phys. Lett.; VOL 51, No.16, Oct 19, 1987, pg 152-154	
	55	SNEH, A. et al., <i>Compact Low Crosstalk and Low Propagation Loss Quantum-Well Y-Branch Switches</i> ; PDP 4-1 - 4-5	
	56	STOLL, L. et al., <i>1:8 Optical Matrix Switch on InP/InGaAsP with Integrated Mode Transformers</i> ; Optical Switches and Modulators II, pg 531-534	

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Under the Paperwork Reduction Action of 1995, no persons are required to response to a collection of information unless it contains a valid OMB number.

57	SUGITA, A. et al., <i>Very Low insertion Loss Arrayed- Waveguide Grating with Vertically Tapered Waveguides</i> , IEEE Photonics Technology Letters, VOL 12, No. 9, Sept. 2000; pg 1180-1182.	
58	TADA, K. et al., <i>Bipolar Transistor Carrier-Injected Optical Modulator/Switch: Proposal and Analysis</i> , IEEE Electron Device Letters, VOL EDL-7, No.11, Nov 1986, pg 605-606	
59	VINCHANT et al, <i>InP 4x1 Digital-Optical-Switch Module For Multiwavelength Cross-Connect Applications</i> ; OFC '95 Technical Digest, Thursday ThK2, pg 281-282	
60	VINCHANT, J.F. et al., <i>First Polarisation insensitive 4x4 Switch matrix on InP with Digital Optical Switches</i> , TuB7.3, pg 341-344	
61	VINCHANT, J.F. et al., <i>InP Digital Optical Switch: Key Element for Guided- Wave Photonic Switching</i> ; IEE Proceedings-J, VOL 140, No.5, Oct 1993; pg 301-307	
62	VINCHANT, J.F. et al., <i>Low Driving Voltage or Current Digital Optical Switch on InP for Multiwavelength System Applications</i> ; Electronics Letters, VOL 28, No.12, Jun 4, 1992; pg 1135-1137	
63	WANRU, Z. et al., <i>Total Internal Reflection Optical Switch with Injection Region Isolated by Oxygen Ion Implantation</i> ; pg 1-10	
64	YANAGAWA, H. et al., <i>Polarization-and Wavelength-Insensitive Guided-Wave Optical Switch with Semiconductor Y Junction</i> ; Journal of Lightwave Technology, VOL 8, No.8, Aug 1990, pg 1192-1197	

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